



# UNITED STATES PATENT AND TRADEMARK OFFICE

SA

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,705	01/17/2002	Christian Sauska	P-2410	1433
7590	08/11/2004		EXAMINER	
Paul A. Fattibene Fattibene and Fattibene 2480 Post Road Southport, CT 06490			LEYBOURNE, JAMES J	
			ART UNIT	PAPER NUMBER
				2881

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

8A

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/051,705	SAUSKA ET AL.
Examiner	Art Unit	
James J. Leybourne	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 April 2004.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 6-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 6-15, 17 and 22-24 is/are allowed.
- 6) Claim(s) 16 and 18-21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 04 March 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. According to the "Amendment" received April 1, 2004, the specification has been amended; claims 6, 11, 12, 17, 22 and 23 have been amended; claims 1-5 have been canceled; and claim 24 has been added.

### *Response to Arguments*

2. Applicant's arguments with respect to claims 16 and 18-21 have been considered and are not persuasive.

Regarding claims 16 and 21, in response to applicant's argument that there is no teaching to replace the lamp of Brais with a lamp containing grooves, as taught by Shurgan, it is pointed out that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In the instant case, the germicidal use recitation in the preamble does not provide any structural difference between the claimed lamp and the prior art lamp. Also, it is noted that the grooves of the prior art lamp are capable of creating turbulent flow.

Regarding claims 18-20, in response to applicant's argument that there is no teaching to combine the lamp of Shurgan with the purification device of Wyndham, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of

performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wyndham (USPN 3791790) in view of Shurgan (USPN 3988633).

Wyndham discloses a purification device for fluids (Fig. 2, columns 4 lines 65-69 and column 5, lines 1-8) comprising a purifier chamber 13, which is an annular space where fluid being treated is forced through an annulus surrounding UV lamp 16 between the cylinder wall of chamber 13 and a concentric transparent cylinder 18.

Wyndham does not teach a germicidal lamp comprising a non-uniform contour capable of creating turbulent flow. Shurgan discloses a low-pressure discharge lamp, particularly a fluorescent lamp, having a plurality of separate and continuous helicoidal

grooves along its length (figures 4-5, and column 1, lines 11-18). These lamps are clearly capable of creating a turbulent flow in a fluid, including air that moves across the surfaces of the lamp.

It would be obvious to one of ordinary skill in the art to replace the ultraviolet lamp of Wyndham with a lamp containing grooves as taught by Shurgan because Shurgan teaches these lamps permit a longer effective arc stream length in the same envelope thereby increasing the wattage loading of the lamp, have better recombination of the mercury ions in the plasma with the phosphor on the envelope wall to improve the efficiency (column 1, lines 30-35). As discussed under claim 1, these lamps are clearly capable of creating a turbulent flow in a fluid, including air that moves across the surfaces of the lamp.

5. Claims 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brais (USPN 5833740) in view of Shurgan (USPN 3988633). In Fig. 2, Brais discloses an air purification system comprising an ultraviolet lamp 38. He teaches that a motor-driven fan can be used to cause turbulence in the air in the vicinity of the vacuum UV source 18 (column 8, lines 56-60).

Brais does not teach using a lamp with a non-uniform exterior surface contour capable of creating turbulent flow in the air. It would be obvious to one of ordinary skill in the art to replace the ultraviolet lamp of Brais with a lamp containing grooves as taught by Shurgan because Shurgan teaches these lamps permit a longer effective arc stream length in the same envelope thereby increasing the wattage loading of the lamp, have better recombination of the mercury ions in the plasma with the phosphor on the

envelope wall to improve the efficiency (column 1, lines 30-35). These lamps are clearly capable of creating a turbulent flow in a fluid, including air that moves across the surfaces of the lamp.

***Allowable Subject Matter***

6. Claims 6-15, 17 and 22-24 are allowed.

7. The following is an examiner's statement of reasons for allowance:

Regarding independent claim 6, the prior art fails to disclose or make obvious a germicidal lamp comprising a cylindrical ultraviolet lamp; and a transparent envelope having an exterior non-uniform surface contour enclosing said cylindrical ultraviolet lamp.

Claims 7-10 are allowed by virtue of their dependency on claim 6.

Regarding independent claim 11, the prior art fails to disclose or make obvious a water purification system comprising a chamber for containing a fluid to be purified and an ultraviolet lamp comprising an exterior non-uniform surface contour placed within said chamber so that the fluid flows over the exterior non-uniform surface contour.

Claims 13-15 are allowed by virtue of their dependency on claim 11.

Regarding independent claims 12 and 23, the prior art fails to disclose or make obvious a water purification system comprising an ultraviolet lamp as cited in claim 6.

Regarding independent claim 17, the prior art fails to disclose or make obvious an air purification system comprising an ultraviolet lamp as cited in claim 6.

Claim 24 is allowed by virtue of its dependency on claim 23.

Regarding independent claim 22, the prior art fails to disclose or make obvious a method of purifying a fluid wherein the fluid flows over an exterior non-uniform surface contour of an ultraviolet lamp comprising an exterior non-uniform surface contour.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

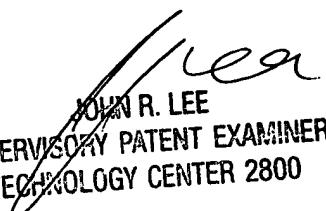
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James J. Leybourne whose telephone number is (571) 272-2478. The examiner can normally be reached on M-F 9:00- 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 26, 2004

JJL

  
JOHN R. LEE  
SUPPLY PATENT EXAMINER  
TECHNOLOGY CENTER 2800